APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/047,223	01/15/2002	Anthony Walter Harty	SJO920010113US1	5751

			EXAMINER
7590	10/28/2005		NAHAR, QAMRUN

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ART UNIT	PAPER NUMBER
2191	

DATE MAILED: 10/28/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

<table>
<tr><td colspan="2" rowspan="2">Office Action Summary</td><td>Application No.
10/047,223</td><td>Applicant(s)
HARTY ET AL.</td><td></td></tr>
<tr><td>Examiner
Qamrun Nahar</td><td>Art Unit
2191</td><td></td></tr>
</table>

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE <u>3</u> MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) ☒ Responsive to communication(s) filed on <u>21 July 2005</u>.

2a) ☒ This action is **FINAL**.   2b) ☐ This action is non-final.

3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) ☒ Claim(s) <u>27-36</u> is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) ☐ Claim(s) _____ is/are allowed.

6) ☒ Claim(s) <u>27-36</u> is/are rejected.

7) ☐ Claim(s) _____ is/are objected to.

8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) ☐ The specification is objected to by the Examiner.

10) ☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1.   This action is in response to the amendment filed on 7/21/05.

2.   The objections to claims 1 and 19 are moot in view of applicant's amendment.

3.   The rejection under 35 U.S.C. 112, second paragraph, as being indefinite for failing to

particularly point out and distinctly claim the subject matter which applicant regards as the

invention to claims 17 and 20 is moot in view of applicant's amendment.

4.   The rejection under 35 U.S.C. 102(e) as being anticipated by Colligan (U.S. 6,405,329) to

claims 1-26 is moot in view of applicant's amendment.

5.   Claims 1-26 have been canceled.

6.   Claims 27-36 have been added.

7.   Claims 27-36 are pending.

8.   Claims 27-36 stand finally rejected under 35 U.S.C. 103(a) as being unpatentable over

Colligan (U.S. 6,405,329) in view of Flanagan (U.S. 6,378,087), in view of Fielder (U.S.

5,995,624), and in further view of Chen (U.S. 5,642,478).

Response to Amendment

Claim Rejections - 35 USC § 103

9.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

10.   Claims 27-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Colligan

(U.S. 6,405,329) in view of Flanagan (U.S. 6,378,087), in view of Fielder (U.S. 5,995,624), and

in further view of Chen (U.S. 5,642,478).

Per Claim 27 (New):

Colligan teaches a system for tracking errors in program code ("The embodiments of the

present disclosure advantageously provide an improved method of correlating the storage device

to a computer system and correlating recent operating characteristics with the time and date of

the behavior. In addition, the present embodiments provide an improved method and apparatus

for a tracking a given alleged failed HDD upon return to the factory for repair and error

analysis." in column 2, lines 24-31), said system comprising: first, second and third buffers

("Interface 32 routes information to and from the at least one computer readable medium 34.

Still further, interface 32 can include an embedded controller with suitable firmware for logging

characteristic operational information, as discussed herein. At least one non-volatile buffer is

located in a reserved area of the at least one computer readable medium 34. For example, the at

least one buffer may include an error buffer 40, a timestamp benchmark buffer 42, an installation

ID buffer 44, and a snapshot buffer 46. The reserved area of the computer readable media of the

disk drive is not a standard or normal user data area of the disk drive." in column 3, lines 28-39);

and a tracing program embedded in said program code to monitor operation of said program

code and log errors; said tracing program configured to log said errors in said first buffer

("Referring now to FIG. 4, an exemplary error buffer 40 is illustrated. The buffer 40 includes

error type information entries 60 and corresponding POH entries 62. Error buffer 40 is updated

upon an occurrence of prescribed errors or corrective action events implemented by the disk

drive. As illustrated in FIG. 4, a first read error (RE) occurred at a POH of twenty-two (22)

hours, as indicated by reference numeral 64. A second read error occurred at a POH of twenty-

six (26) hours." in column 3, lines 65-67 to column 4, lines 1-6). Colligan does not explicitly

teach a tracing program to log warnings and messages pertaining to operation of said program

code, said tracing program configured to log said warnings in said second buffer and said

messages in said third buffer, said tracing program including a merging program module to

subsequently merge said errors, warnings and messages based on a chronological order in which

said errors, warnings and messages were logged.

Flanagan teaches logging warnings pertaining to operation of said program code in said

second buffer (column 8, lines 59-62). Fielder teaches logging messages pertaining to operation

of said program code in said third buffer (column 14, lines 1-3). Chen teaches a merging

program module to subsequently merge said errors, warnings and messages based on a

chronological order in which said errors, warnings and messages were logged (column 10, lines

55-57).

It would have been obvious to one having ordinary skill in the computer art at the time of

the invention was made to modify the system disclosed by Colligan to include a tracing program

to log warnings and messages pertaining to operation of said program code, said tracing program

configured to log said warnings in said second buffer and said messages in said third buffer, said

tracing program including a merging program module to subsequently merge said errors,

warnings and messages based on a chronological order in which said errors, warnings and

messages were logged using the teaching of the combination of Flanagan, Fielder, and Chen.

The modification would be obvious because one of ordinary skill in the art would be motivated

to organize trace data based on the type of data.

Per Claim 28 (New):

The rejection of claim 27 is incorporated, and Chen further teaches wherein all of said

buffers reside in RAM (column 7, lines 39-43 and column 8, lines 6-10).

Per Claim 29 (New):

The rejection of claim 27 is incorporated, and the combination of Colligan, Flanagan,

Fielder, and Chen further teaches wherein said tracing program is further configured to time

stamp each error, warning and message approximately when the respective error, warning and

message is logged (Colligan, column 7, lines 65-67; Flanagan teaches warnings and Fielder

teaches messages, see claim 27 above).

Per Claim 30 (New):

The rejection of claim 27 is incorporated, and the combination of Colligan, Flanagan,

Fielder, and Chen further teaches fourth, fifth, sixth, seventh, eighth and ninth buffers; and

wherein said first buffer stores initialization errors (Colligan, column 3, lines 65-67 to column 4,

lines 1-6), said second buffer stores initialization warnings (Flanagan, column 8, lines 59-62) and

said third buffer stores initialization messages (Fielder, column 14, lines 1-3); and said tracing

program is configured to log read errors in said fourth buffer (Colligan, column 3, lines 65-67 to

column 4, lines 1-6), read warnings in said fifth buffer (Flanagan, column 8, lines 59-62), read

messages in said sixth buffer (Fielder, column 14, lines 1-3), write errors in said seventh buffer

(Colligan, column 3, lines 65-67 to column 4, lines 1-6), write warnings in said eighth buffer

(Flanagan, column 8, lines 59-62) and write messages in said ninth buffer (Fielder, column 14,

lines 1-3).

Per Claim 31 (New):

This is another version of the claimed system discussed above (claims 27 and 30),

wherein all claim limitations also have been addressed and/or covered in cited areas as set forth

above. Thus, accordingly, this claim is also obvious.

Per Claims 32-33 (New):

These are another versions of the claimed system discussed above (claims 28 and 29,

respectively), wherein all claim limitations also have been addressed and/or covered in cited

areas as set forth above. Thus, accordingly, these claims are also obvious.

Per Claims 34-36 (New):

These are another versions of the claimed system discussed above (claims 27-29,

respectively), wherein all claim limitations also have been addressed and/or covered in cited

areas as set forth above. Thus, accordingly, these claims are also obvious.

Response to Arguments

11.   Applicant's arguments with respect to claims 27-36 have been considered but are moot in

view of the new ground(s) of rejection.

Conclusion

12.   Applicant's amendment necessitated the new ground(s) of rejection presented in this

Office action. Accordingly, **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a).

Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE

MONTHS from the mailing date of this action. In the event a first reply is filed within TWO

MONTHS of the mailing date of this final action and the advisory action is not mailed until after

the end of the THREE-MONTH shortened statutory period, then the shortened statutory period

will expire on the date the advisory action is mailed, and any extension fee pursuant to 37

CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

however, will the statutory period for reply expire later than SIX MONTHS from the date of this
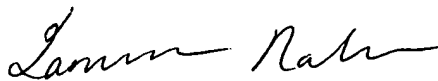
final action.

13.   Any inquiry concerning this communication from the examiner should be directed to

Qamrun Nahar whose telephone number is (571) 272-3730. The examiner can normally be

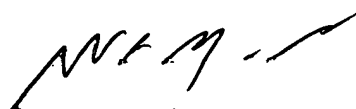reached on Mondays through Fridays from 9:30 AM to 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wei Y Zhen, can be reached on (571) 272-3708. The fax phone number for the organization where this application or processing is assigned is (571) 273-8300.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the TC 2100 Group receptionist whose telephone number is 571-272-2100.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

QN
October 21, 2005

WEI Y. ZHEN
PRIMARY EXAMINER